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| 10/720,925 | 11/24/2003 | Thomas M. Dunn | 32409-CNT1 | 5231 |
| 7590 | 08/18/2005 | | EXAMINER | |
| THOMAS B. LUEBBERING HOVEY, WILLIAMS, TIMMONS & COLLINS Suite 400 2405 Grand Kansas City, MO 64108 | | | NGUYEN, THONG Q | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2872 | |
| | | | DATE MAILED: 08/18/2005 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/720,925 | DUNN, THOMAS M. |
| | Examiner Thong Q. Nguyen | Art Unit 2872 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 June 2005.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6, 12-17 and 24-29 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-6, 12-17 and 24-29 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 24 November 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to the amendment filed on June 13, 2005. It is noted that in the mentioned amendment, applicant has made changes to the specification and the claims. Regarding to the claims, applicant has amended claims 1-2, 4, 6, 12-13, 16, 24 and 26-27 and canceled claims 7-11. The remaining claims 1-6, 12-17 and 24-29 are examined in this Office action. Note that claims 18-23 were canceled by applicant on 12/21/2004.

Drawings

2. The objection to the drawings as set forth in the previous Office action (Office action of 3/21/2005), pages 2-3, item 4) is repeated in this Office action.

It is noted that in the amendment of 6/13/05, page 12, applicant has stated that the applicant has submitted a replacement sheet contained the correction to figure 3; however, the Office has not received the mentioned replacement sheet contained the correction as stated by the applicant.

Specification

3. The lengthy specification which is amended by the amendment of 6/13/05 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 12-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 12 is rejected under 35 USC 112, second paragraph because it is unclear about the structural relationship between the housing and the microscope as recited in the feature thereof "a housing substantially enclosing...externally exposed" (lines 11-14). In particular, it is unclear about the structure of the housing substantially enclosing a light source assembly can removably attach to a microscope so that a portion of the light source assembly is externally exposed.

b) The remaining claims are dependent upon the rejected base claim and thus inherit the deficiency thereof.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Cho (U.S. Patent No. 5,572,370).

Cho discloses a microscope for determining fertile periods. The microscope as described in columns 2-3 and shown in figures. 1-8 comprises the following features: a stand (22) having a body portion (22a) with an upper opening (26a) and a lower opening; a removable assembly (30, 38) supporting a magnifying lens system (36a-36b) and an eyepiece (34); a stage (40) having a surface 940a)

for supporting specimen for observing; a light source assembly disposed at the lower opening of the stand (22) wherein the light assembly comprises the following features: a light emitting element (46); two batteries (48a-48b) and a microswitch (50) having an operating plunger (52) wherein a wire (54) is used to connect a terminal of the light emitting element (46) to the microswitch via a resistor ® and another wire (56) is used to connect the other terminal of the light emitting element (46) to the batteries (48a-48b). As a result of such structure, the connection sections among the wires (54 and 56) and the batteries (48a-b) and the microswitch define a circuit board for the light source assembly.

Applicant should note that the claims do not recite any specific feature/limitation related to the structure of the circuit board claimed. It is noted that the plunger (52) of the microswitch (50) of the light source assembly is externally exposed so that a user can activate the operation of the light source assembly. It is also noted that the removal of the light source assembly is performed independently of the stage (40) by unscrewing the threaded connection between the base portion (22b) and the body portion (22a).

Regarding to the first and second connections, it is noted that the section for connection the wire (56) to the batteries (48a-b) is a first connection, and the connection between the wire 954) and the microswitch (50) is a second connection.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson in view of Yoshinaga (both of record).

Richardson discloses a cordless microscope. The microscope with illuminating system as described in pages 2-6 and shown in figure 1 comprises a frame (114) for supporting a stage module (100) and a microscope tube (119) wherein the stage module is used to support a combination of Leds and circuit board and the microscope tube is used to support a microscope having an objective system (122) and an eyepiece system (125). The connection among the battery (118), Leds (101) and wires are made via the wiring as described in page 3, lines 15+. It is also noted that Richardson disclose the use of a switch (116) for turn ON/OFF the illumination and also the use of external source via the connection (117) as can be seen in page 3.

Regarding to the connections among the Leds, the power source and the switch, while Richardson does not clearly state about the connections; however, such connections among the mentioned elements are inherently disclosed in the arrangement of the light source system provided by Richardson. In particular, since the Leds (101) are mounted on the circuit board (103); therefore, there are connections for connecting the nodes of the Leds to the wires formed on the circuit board. Such connection defines a first connection for connecting the Leds

to the circuit board and for guiding the electrical flow from a light source to the Leds. The circuit board is connected to a switch (116) and a power source in the form of a battery (117) and/or an AC wall adaptor (see page 4, lines 5-7); therefore, there must be have a connector formed on the circuit board for connecting the circuit board and the switch. Such connection defines a second connection. It is also noted that the control potentionmeter (104) and the On/Off switch (116) are externally exposed so that a user can activate the switch/potentionmeter for operating and adjusting the Leds.

As a result of such structure, the microscope with the illuminating system as provided by Richardson meets all of the features recited in the present claims except that he does not explicitly state that the Leds and its circuit board supported the Leds is able to remove or replace independently of the stage module.

However, the installation of an illuminating system onto a base of a microscope wherein the housing or the base supporting at least some components of the illuminating system is able to remove independently to the stage supporting an object to be illuminated and viewed is known to one skilled in the art as can be seen in the microscope provided by Yoshinaga. In particular, Yoshinaga discloses a microscope having an illuminating system. The microscope comprises a stand (4) supporting a stage (5) and a base (2) disposed separately and independently from the stage. Yoshinaga teaches that a tray-shaped mount (20) supporting a dimmer circuit (6) having electrical components (14, 16, 18) is

able to remove from the base of the microscope by unscrewing some screws (22a-b). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system used in the microscope as provided by Richardson by using a stage module having a tray-shaped mount as suggested by Yoshinaga so that a user can easily remove the tray-shaped mount for replacing or removing the circuit board and its Leds for the purpose of repair or changing the light source assembly due to damage to the light source assembly.

10. Claims 5 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson in view of Yoshinaga as applied to claim 4 above and further in view of Loudermilk (of record).

Richardson discloses a cordless microscope. The microscope with illuminating system as described in pages 2-6 and shown in figure 1 comprises a frame (114) for supporting a stage module (100) and a microscope tube (119) wherein the stage module is used to support a combination of Leds and circuit board and the microscope tube is used to support a microscope having an objective system (122) and an eyepiece system (125). The connection among the battery (118), Leds (101) and wires are made via the wiring as described in page 3, lines 15+. It is also noted that Richardson disclose the use of a switch (116) for turn ON/OFF the illumination and also the use of external source via the connection (117) as can be seen in page 3.

Regarding to the connections among the Leds, the power source and the switch, while Richardson does not clearly state about the connections; however, such connections among the mentioned elements are inherently disclosed in the arrangement of the light source system provided by Richardson. In particular, since the Leds (101) are mounted on the circuit board (103); therefore, there are connections for connecting the nodes of the Leds to the wires formed on the circuit board. Such connection defines a first connection for connecting the Leds to the circuit board and for guiding the electrical flow from a light source to the Leds. The circuit board is connected to a switch (116) and a power source in the form of a battery (117) and/or an AC wall adaptor (see page 4, lines 5-7); therefore, there must be have a connector formed on the circuit board for connecting the circuit board and the switch. Such connection defines a second connector. It is also noted that the control potentionmeter (104) and the On/Off switch (116) are externally exposed so that a user can activate the switch/potentionmeter for operating and adjusting the Leds.

As a result of such structure, the microscope with the illuminating system as provided by Richardson meets all of the features recited in the present claims except that he does not explicitly state that the Leds and its circuit board supported the Leds is able to remove or replace independently of the stage module.

However, the installation of an illuminating system onto a base of a microscope wherein the housing or the base supporting at least some components of the

illuminating system is able to remove independently to the stage supporting an object to be illuminated and viewed is known to one skilled in the art as can be seen in the microscope provided by Yoshinaga. In particular, Yoshinaga discloses a microscope having an illuminating system. The microscope comprises a stand (4) supporting a stage (5) and a base (2) disposed separately and independently from the stage. Yoshinaga teaches that a tray-shaped mount (20) supporting a dimmer circuit (6) having electrical components (14, 16, 18) is able to remove from the base of the microscope by unscrewing some screws (22a-b). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system used in the microscope as provided by Richardson by using a stage module having a tray-shaped mount as suggested by Yoshinaga so that a user can easily to remove the tray-shaped mount for replacing or removing the circuit board and its Leds for the purpose of repair or changing the light source assembly due to damage to the light source assembly.

Regarding to the third connection between a battery recharger and the battery or power source as recited in claim 5 and in claim 24, it is noted that Richardson disclose the use of a connection for the purpose of receiving power from a solar cell array or from an AC wall adapter. See page 4, lines 5-7.

While Richardson does not clearly state that the power from an AC wall adapter is used to recharge the battery; however, such a connection as provided by Richardson is able to provide a means for recharging the battery. If it is not

inherent then the use of an illuminating system having connections to a recharging battery and an AC supply wherein the AC supplies current for recharging the battery is suggested to one skilled in the art as can be seen in the illumination system provided by Loudermilk. See column 5, lines 24-34 and fig. 2. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system provided by Richardson and Yoshinaga by using the power from an AC wall adapter for recharging the battery as suggested by Loudermilk for the purpose of recharging the battery so that the power of the battery is able to use when an AC wall adapter is not available in later use.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson in view of Yoshinaga as applied to claim 1 above and further in view of Vennard (of record).

The microscope having an illuminating system provided by Richardson and Yoshinaga as described above does not disclose that the number of LEDs is four. However, the use of an illuminating system having four LEDs is known to one skilled in the art as can be seen in the system provided by Vannard. In particular, Vennard discloses an illuminating system for use in a watch module. The illuminating system as described in columns 2-4 and shown in figures 1-2, for example, comprises a circular-shaped circuit board (10) having a plurality of electrical wires embedded therein for the purpose of transmitting current flow from a battery/power source, a set of four LEDs (28, 30, 34 and 36) mounted on

the circuit board for projecting light upwardly from the circuit board. The formation of connectors for connecting the LEDs and the battery/power source and a switch for controlling the ON/OFF transmission of current from the battery to the LEDs are also disclosed by Vennard as can be seen in columns 3-4. Thus, it would have obvious to one skilled in the art at the time the invention was made to modify the illuminating system provided by Richardson and Yoshinaga by using four LEDs as suggested by Vannard for the purpose of providing an illuminating pattern with more brightness to the object or the area supporting the object.

12. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson in view of Yoshinaga.

Richardson discloses a cordless microscope. The microscope with illuminating system as described in pages 2-6 and shown in figure 1 comprises a frame (114) for supporting a stage module (100) and a microscope tube (119) wherein the stage module is used to support a combination of Leds and circuit board and the microscope tube is used to support a microscope having an objective system (122) and an eyepiece system (125). The connection among the battery (118), Leds (101) and wires are made via the wiring as described in page 3, lines 15+. It is also noted that Richardson disclose the use of a switch (116) for turn ON/OFF the illumination and also the use of external source via the connection (117) as can be seen in page 3.

Regarding to the connections among the Leds, the power source and the switch, while Richardson does not clearly state about the connections; however, such

connections among the mentioned elements are inherently disclosed in the arrangement of the light source system provided by Richardson. In particular, since the Leds (101) are mounted on the circuit board (103); therefore, there are connections for connecting the nodes of the Leds to the wires formed on the circuit board. Such connection defines a first connection for connecting the Leds to the circuit board and for guiding the electrical flow from a light source to the Leds. The circuit board is connected to a switch (116) and a power source in the form of a battery (117) and/or an AC wall adaptor (see page 4, lines 5-7); therefore, there must be have a connector formed on the circuit board for connecting the circuit board and the switch. Such connection defines a second connection. It is also noted that the control potentionmeter (104) and the On/Off switch (116) are externally exposed so that a user can activate the switch/potentionmeter for operating and adjusting the Leds.

As a result of such structure, the microscope with the illuminating system as provided by Richardson meets all of the features recited in the present claims except that he does not explicitly state that the Leds and its circuit board supported the Leds is able to remove or replace independently of the stage module.

However, the installation of an illuminating system onto a base of a microscope wherein the housing or the base supporting at least some components of the illuminating system is able to remove independently to the stage supporting an object to be illuminated and viewed is known to one skilled in the art as can be

seen in the microscope provided by Yoshinaga. In particular, Yoshinaga discloses a microscope having an illuminating system. The microscope comprises a stand (4) supporting a stage (5) and a base (2) disposed separately and independently from the stage. Yoshinaga teaches that a tray-shaped mount (20) supporting a dimmer circuit (6) having electrical components (14, 16, 18) is able to remove from the base of the microscope by unscrewing some screws (22a-b). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system used in the microscope as provided by Richardson by using a stage module having a tray-shaped mount as suggested by Yoshinaga so that a user can easily to remove the tray-shaped mount for replacing or removing the circuit board and its Leds for the purpose of repair or changing the light source assembly due to damage to the light source assembly.

Regarding to the feature that the light source assembly is operable to provide over forty hours of continuous operation as recited, such a feature is readable from the arrangement of the light source assembly as provided by Richardson. The support for that conclusion is as follow. Richardson disclose the use of a connection between the circuit board and power source wherein the power source can be a battery (117) or an external source which power is supplied from a solar cell array or from an AC wall adapter. See page 4, lines 5-7. When the AC wall adapter is connected to the illuminating system of the microscope then the light source assembly is able to operate a continuous period of time until the

lifetime of the Leds. While Richardson does not clearly state that the lifetime of the Leds is over forty hours; however, it is known to one skilled in the art and also is sold in the market a plurality of Leds whose lifetime is more than 40 hours. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system provided by Richardson by using Leds whose lifetime is more than 40 hours for the purpose of providing light for an observation which requires a long time for analyzing or observation.

13. Claims 6, 12-13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson in view of Yoshinaga as applied to claims 1 and 27 above and further in view of the Japanese reference No. 11-216111 (of record).

As described above, the cordless microscope having an illuminating system as provided by Richardson and Yoshinaga meets all of the limitations recited in claims 6 and 12-13 except he does not clearly state that the Leds used in his illuminating system produces a highly-focused angle of illumination. However, such a feature is inherent from the Leds used in the illumination system provided by Richardson absent any specific limitations related to the structure of the Leds claimed in the present claims 6 and 12. Applicant should note that a light emitting diode is a light source which produces a high focus illumination in comparison with incandescent lamp. If it is not inherent then it would have been obvious to one skilled in the art at the time the invention was made to utilize low-powered highly focused Leds of recent generations of AlInGaP, AlGaAs, InGaN, ...for the Leds used in the illumination system of the microscope provided by

Richardson. An example of use an InGaN Led in an illuminating system of an endoscope is provided in the system described in the Japanese No. '111. It is also noted such an InGaN Led can provide over five thousand millicandellas of illumination. Thus, it would have been obvious to one skilled in the art at the time the invention was made to utilize low-powered highly focused Leds of recent generations of AlInGaP, AlGaAs, InGaN, ...for the Leds as the use of an InGaN Led suggested by the Japanese reference '111 in the illuminating system of Richardson for the purpose of prolong the power of the battery and simultaneously providing a highly-focused illumination.

14. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson in view of Yoshinaga and the Japanese reference No. 11-216111 as applied to claim 12 above, and further in view of Vennard.

The microscope having an illuminating system provided by Richardson, Yoshinaga and the Japanese reference No. '111 as described above does not disclose that the number of LEDs is four and the circuit board has a circular shape. However, the use of an illuminating system having four LEDs is known to one skilled in the art as can be seen in the system provided by Vennard. In particular, Vennard discloses an illuminating system for use in a watch module. The illuminating system as described in columns 2-4 and shown in figures 1-2, for example, comprises a circular-shaped circuit board (10) having a plurality of electrical wires embedded therein for the purpose of transmitting current flow from a battery/power source, a set of four LEDs (28, 30, 34 and 36) mounted on

the circuit board for projecting light upwardly from the circuit board. The formation of connectors for connecting the LEDs and the battery/power source and a switch for controlling the ON/OFF transmission of current from the battery to the LEDs are also disclosed by Vennard as can be seen in columns 3-4. Thus, it would have obvious to one skilled in the art at the time the invention was made to modify the illuminating system provided by Richardson, Yoshinaga and the Japanese reference '111 by using four LEDs as suggested by Vennard for the purpose of providing an illuminating pattern with more brightness to the object or the area supporting the object.

15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson, Yoshinaga and the Japanese reference No. 11-216111 as applied to claim 12 above, and further in view of Gurz et al (of record).

The combined product as provided by Richardson, Yoshinaga and the Japanese reference No. '111 meets all of the limitations recited in the claims except the feature that the feature related to a reflective coating formed on the circuit board. However, the use of a reflective coating on a circuit board supporting a plurality of LEDs is known to one skilled in the art as can be seen in the illuminating system provided by Gurz et al. In particular, Gurz et al disclose an illuminating system for an exit sign. The illuminating system as described in columns 4-7, claims 13-14 and shown in figures 2 and 7-8, for example, comprises a circuit board (70) for supporting a plurality of LEDs (65) wherein a reflective coating is coated for the purpose of increasing the reflection (column 5, lines 34+). Thus, it

would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system provided by Richardson, Yoshinaga and the Japanese reference No. '111 by utilizing a reflective coating on the circuit board as suggested by Gurz et al for the purpose of increasing the reflectant process.

16. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson, Yoshinaga, and the Japanese reference No. 11-216 111 as applied to claim 13 above, and further in view of Loudermilk.

The combined product as provided by Richardson, the Japanese reference No. '111 and Gurz et al does not clearly state the third connector for connection between a battery recharger and the battery or power source as recited. However, it is noted that Richardson disclose the use of a connection for the purpose of receiving power from a solar cell array or from an AC wall adapter. See page 4, lines 5-7. While Richardson does not clearly state that the power from an AC wall adapter is used to recharge the battery; however, such a connection as provided by Richardson is able to provide a means for recharging the battery. If it is not inherent then the use of an illuminating system having connections to a recharging battery and an AC supply wherein the AC supplies current for recharging the battery is suggested to one skilled in the art as can be seen in the illumination system provided by Loudermilk. See column 5, lines 24-34 and fig. 2. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system provided by

Richardson, Yoshinaga and the Japanese reference '111 by using the power from an AC wall adapter for recharging the battery as suggested by Loudermilk for the purpose of recharging the battery so that the power of the battery is able to use when an AC wall adapter is not available in later use.

Double Patenting

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. Claims 1-6, 12-13, 15, 17 and 24-29, as best as understood, are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-15 of U.S. Patent No. 6,714,348 in view of Yoshinaga.

The device as claimed in claims 12-15 of Patent '348 discloses a cordless microscope having a stage for supporting a specimen, a light source assembly for illuminating the specimen which light source assembly comprises the following features: A circuit board, a four Leds mounted on the circuit board wherein the Leds produce highly-focused angle of illumination and three

connections for connecting the Leds, the power source and the battery recharger.

As a result of such structure, the microscope with the illuminating system as claimed in claims 12-15 of Patent '348 meets all of the features recited in the present claims except that the claims do not explicitly state that the Leds and its circuit board supported the Leds is able to remove or replace independently of the stage module.

However, the installation of an illuminating system onto a base of a microscope wherein the housing or the base supporting at least some components of the illuminating system is able to remove independently to the stage supporting an object to be illuminated and viewed is known to one skilled in the art as can be seen in the microscope provided by Yoshinaga. In particular, Yoshinaga discloses a microscope having an illuminating system. The microscope comprises a stand (4) supporting a stage (5) and a base (2) disposed separately and independently from the stage. Yoshinaga teaches that a tray-shaped mount (20) supporting a dimmer circuit (6) having electrical components (14, 16, 18) is able to remove from the base of the microscope by unscrewing some screws (22a-b). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system used in the microscope as claimed in claims 12-15 of the Patent '348 by using a stage module having a tray-shaped mount as suggested by Yoshinaga so that a user can easily to remove the tray-shaped mount for replacing or removing the circuit board and its

Leds for the purpose of repair or changing the light source assembly due to damage to the light source assembly.

Note: It is noted that the claim 12 shown in the Patent does not contain all of the features of the claim as indicated in the Notice of allowance due to printing error made by the Office. A certificate of correction is now made to correct the content of the claim 12 of the Patent 6,714,348. The claims of the present application are rejected on the corrected version of the claims to be allowed in the parent application.

19. Claim 16 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-15 of U.S. Patent No. 6,714,348 in view of Yoshinaga as applied to claim 12 above and further in view of Gurz et al.

The combined product as provided by the device as disclosed in the patent claims 12-15 and Yoshinaga does not disclose that the circuit board has a reflective coating thereon. However, the use of a reflective coating on a circuit board supporting a plurality of LEDs is known to one skilled in the art as can be seen in the illuminating system provided by Gurz et al. In particular, Gurz et al disclose an illuminating system for an exit sign. The illuminating system as described in columns 4-7, claims 13-14 and shown in figures 2 and 7-8, for example, comprises a circuit board (70) for supporting a plurality of LEDs (65) wherein a reflective coating is coated for the purpose of increasing the reflection (column 5, lines 34+). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system of the

combined product provided by claims 12-15 of the Patent No. '348 and Yoshinaga by utilizing a reflective coating on the circuit board as suggested by Gurz et al for the purpose of increasing the reflectant process.

20. Claim 14 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-15 of U.S. Patent No. 6,714,348 in view of Yoshinaga as applied to claim 12 above and further in view of Vennard.

The combined product as disclosed in the patent claims 12-15 and Yoshinaga does not disclose that the circuit board has a circular shape. However, the use of an illuminating system having four LEDs mounted on a circular-shaped circuit board is known to one skilled in the art as can be seen in the system provided by Vennard. In particular, Vennard discloses an illuminating system for use in a watch module. The illuminating system as described in columns 2-4 and shown in figures 1-2, for example, comprises a circular-shaped circuit board (10) having a plurality of electrical wires embedded therein for the purpose of transmitting current flow from a battery/power source, a set of four LEDs (28, 30, 34 and 36) mounted on the circuit board for projecting light upwardly from the circuit board. The formation of connectors for connecting the LEDs and the battery/power source and a switch for controlling the ON/OFF transmission of current from the battery to the LEDs are also disclosed by Vennard as can be seen in columns 3-4. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the illuminating system provided by the claims 12-15 of the Patent '348 and Yoshinaga by mounting the four LEDs on a circular-shaped

circuit board as suggested by Vennard for the purpose of providing an illuminating pattern with more brightness to the object or the area supporting the object.

Response to Arguments

21. Applicant's arguments with respect to claims 1-6, 12-17 and 24-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

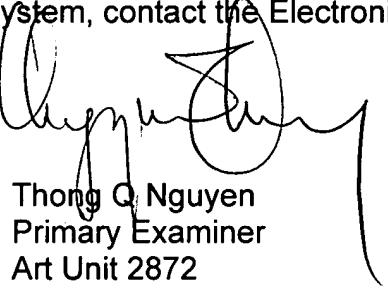
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen
Primary Examiner
Art Unit 2872
